

Whether the following case has any analogy with the foregoing, I have been unable to determine. The pain was seated in the sole of the foot, and was brought on by walking; but why it should be occasioned thereby, or in what particular tissue it lay, does not appear. The details reminded me very much of a similar case described by my friend Mr. Baker, which, in fact, was an instance of syphilitic periostitis in the os calcis. But, even with the light of that gentleman's experience, I failed to confer any benefit upon my patient; nor could I establish the connexion of his malady with any impurity in the blood, whether of a syphilitic, gouty, or rheumatic character.

CASE VI. [Mr. Harvey.] T. Granger, aged 40, shoemaker. He has drunk much ale. When about 22, he contracted venereal disease severely, for which he was salivated; a cicatrix of a bubo remains in the left groin. He never had any secondary symptoms. About eight months ago he had a gonorrhoeal discharge, but no indications whatever of syphilitic infection. There is no evidence of rheumatism in his family. He has never passed gravel, nor had his urine thick. For the last fifteen years he has been subject to pain in different parts of his body. At the beginning of that period, he kept his bed on account of a prolonged indisposition, consisting first of pain in the right wrist, without swelling or redness, speedily leaving that part, and passing in succession to his shoulder, to his right and left flank (where it remained with severity for three weeks); thence to the region of the trochanters, and to the intertrochanteric fossa; frequently, however, changing its place, and again returning to its former seat. Ten years after that illness, he was again confined for the same period by a very similar attack; and he has since had three or four returns of the pain. Once the pain lay for a part of a single day in the great toe-joint, after a strain, the joint being reddened and swollen. In a few hours, however, it left this spot for the hip. For this complaint he has been five times in the Queen's Hospital.

About six weeks ago, his right heel began to ache; and in a month's time he was obliged to leave work on that account. With this malady he entered the General Hospital.

The seat of the pain was the sole of the right foot, chiefly on the under surface of the heel, radiating thence up the inside of the foot. The left foot was entirely unaffected. The pain was felt chiefly in walking; whilst he lay, he felt little of it. He was often reduced to walking on his toes; and, after walking, the pain extended on either side of the foot, in the posterior third. The painful part (the plantar surface of the heel) was exceedingly tender, and continued so throughout his residence in hospital; but not the slightest thickening or enlargement could at any time be detected. Whilst under observation, he had no pain elsewhere, excepting a little in his side and back. He was pale, but not cachectic. His urine was perfectly healthy.

He continued under observation five months. During that period, various plans of treatment were tried very fully: iodide of potassium; salivation, again followed by the iodide, under the impression suggested by Mr. Baker's case, that the malady might have a syphilitic origin; colchicum, with the citrate and sesquioxide of iron; and generous diet. Local applications, consisting of blistering, injection of morphia, and the application of extract of belladonna, were also employed. By none of these measures was he at all benefited; and finally he left the hospital in much the same state as when he entered.

[To be continued.]

A VALUABLE BEETLE. At Mr. Drury's late sale of entomological specimens, a *Scarabæus Goliathus* was sold for twelve guineas! His cabinet contained ten thousand insects.

Original Communications.

CLINICAL ILLUSTRATIONS OF DIPHThERIA.

By EDWARD HEADLAM GREENHOW, M.D., F.R.C.P.,
Consulting-Physician to the Western General
Dispensary, and Assistant-Physician to
the Middlesex Hospital.

EVERY fact which can afford additional information upon so interesting a disease as diphtheria appearing to be worthy of record, I am induced to throw together the following cases illustrative of certain points in the history of this disease, in the hope that they may prove interesting to the readers of the BRITISH MEDICAL JOURNAL. The first two well illustrate a circumstance which I only ventured to surmise in my book on diphtheria, namely, the especial susceptibility of the members of particular families to contract this disease, and its greater tendency in such cases to prove fatal.

Late in the autumn of 1860, I saw a little girl in Hertfordshire, who was then suffering severely from the nervous sequelæ of diphtheria. I only saw her once; but the family history in relation to this disease was so remarkable, that I took care to ascertain the facts correctly. Three children of the family had died previous to 1860 of illnesses which were said by the parents to have been identical with that from which my patient was recently convalescent, and two others had suffered from the same disease during the earlier part of the autumn, namely, a boy, aged six years, who had been taken ill in the month of July, and had recovered; and a second boy, aged nine years, who died of diphtheria in the month of August. The earlier cases were those of a girl, aged eleven years, who died in July, 1855; of another child, aged fourteen years, who died in August, 1855; and of a third child, also aged fourteen years, who died in London in November, 1859. The three deaths had all been registered under the name of croup, but the history of the cases left no doubt on my mind that they really had been cases of diphtheria, whilst the circumstance that they had not all occurred in the same house or neighbourhood appeared clearly to negative the supposition that these children had suffered in consequence of a common exposure to any local cause.

In November 1860, I visited a little girl, at a small country village in Essex, who was then very ill, and subsequently died of diphtheria, a complaint which had proved exceedingly fatal in her family. The earlier cases had in this instance also been called croup; but on inquiry, they appeared to have been identical with the disease then present in the house. The first death in this family from this cause was that of an infant, in April 1841; the second, that of a child, ten years of age, in January 1845; and the third, that of another child, aged three years and a half, in April 1845. The family continued healthy from the latter date until June 1860, when a boy, aged eleven years, suffered from diphtheria, but recovered. After an interval of nearly four months, a second boy, aged fourteen years, took the disease, and died; and between the date of his death in October and that of my visit, four other children, respectively aged two, five, six, and ten years, suffered likewise from diphtheria, three of whom died.

The next group of cases I am about to mention illustrates, but less conclusively, the same point as the two last series; but is, perhaps, more especially interesting as serving to confirm the conclusion, at which probably

most careful observers have arrived, that there is an intimate relation between diphtheria and the cases of milder sore-throat which so often prevail simultaneously with it.

CASE I. In May 1858, I was consulted for a young lady, residing in Kent, who had been suffering for some days from sore-throat. The throat was getting well at the time of my visit, but the patient was greatly depressed, and there was a small patch of exudation upon the left tonsil. This case did well. In December, 1860, I was consulted for a brother of my former patient, who was suffering from what proved to be a fatal attack of diphtheria. I then learnt that three others of the younger members of the family were convalescent from mild sore-throat unaccompanied by exudation, and before the conclusion of the case for which I had been consulted, a young lady, sister of my patient, had likewise a mild attack of diphtheria. Here, then, at the same time, and in the same household, were five cases of sore-throat, two of which were unquestionable cases of diphtheria, the others being cases of what would, under other circumstances, have been regarded as simple inflammatory sore-throat.

The tendency of diphtheria during its existence as an epidemic to become, so to speak, engrafted on other diseases, has been noticed by various observers. I have myself observed and recorded several cases, and examples have also been published by Drs. Louis, Gull, Heselop, and Fleming. Most commonly, the diphtheria is, in such cases, an intercurrent affection that only appears after the disease with which it is associated has existed for some time. Thus diphtheria has been observed to occur in the course of typhoid and other fevers, but rarely until towards their termination. The two following cases are therefore especially interesting, because in both of them a diphtheritic condition of the fauces was the earliest prominent symptom of illness, which eventually became developed into well marked typhoid fever.

CASE II. C. B., a sailor boy, aged sixteen years, was admitted into the Middlesex Hospital, under the care of my friend Dr. Stewart, on December 5th, 1861. Having been exposed to wet and cold the day before, he became ill on November 28th, and complained of sore-throat, slight headache and loss of appetite. He also had diarrhœa. On the following day, he had epistaxis, thirst, and slight fever. On the 30th, the other symptoms remaining unaltered, he had dimness of sight and rambling delirium, and on the following day he took to his bed. On admission into the hospital, his skin was warm and soft, his countenance dull and anxious, and a marked alteration in the character of the voice was observed. The tongue was rather dry and excessively foul, with a thick greyish-brown coating on the dorsum. The palate and fauces were of a deep red colour, and the tonsils considerably enlarged and covered with a white exudation. The glands at the angles of the lower jaw were enlarged, but not tender. The articulation was indistinct, as though from some defect in the palate; and there were occasional sibilant and sonorous rhonchi in the chest; respirations 38, short and superficial; pulse 124, undulating and indistinct. On the 6th, the white exudation had extended in patches over the greater part of the soft palate and fauces; the articulation was still indistinct, but the patient could swallow without difficulty. Respirations 42; pulse 132, variable and indistinct; breath and heart sounds healthy. In other respects, the case was becoming more like one of typhoid fever. On the 7th, the throat was nearly free from exudation, that which remained consisting of small patches hanging loosely adherent to the mucous membrane; the soft palate, fauces, and tonsils were of a deep red colour, and the voice had still a snuffing character. Four or five rose spots were now observed upon

the surface of the abdomen, which was also slightly tympanitic; but there was neither gurgling nor pain on pressure in the right iliac fossa. The urine had a specific gravity of 1020, and contained a very small proportion of albumen. On the 8th, the throat continued to mend, and the snuffing had diminished. The throat now gradually got well, but the fever ran on. Some slight pulmonary symptoms which supervened as the sore-throat began to mend, gradually became aggravated, and mild broncho-pneumonia occurred in both lungs. On December 30th, no trace of albumen was detected in the urine. There was still slight hoarseness, and the pupils were large and sluggish, but there was no impairment of vision. On January 3rd, the lad was very pallid, and the posterior fauces remained very red, but the soft palate and buccal mucous membrane were free from congestion. Gait quite steady. On January 14th, the throat was perfectly well; the lad had gained flesh and strength, and none of the nervous sequela common after diphtheria having become developed, he was discharged.

CASE III. The next case was that of a gentleman, aged 69, who, having previously been in his usual health, had suffered for several days from malaise, loss of appetite, and total disinclination for exertion, when, late in the evening of February 25th, I was requested to visit him. The tongue was foul but moist, and red at the edges. The bowels were loose from the action of medicine, and he had once vomited. His aspect was anxious, and his voice had the raucous character, so often present in the beginning of diphtheria, which is incident to the acute stage of the disease, and is very different from the snuffing nasal voice arising from paralysis of the soft palate and adjacent parts which supervenes at the close of the complaint. He complained of slight headache, but said that his throat was quite well. The breathing was a little hurried, but otherwise normal. The throat was reddened, and covered with greyish-looking exudation. February 26th. He had slept well; the countenance was improved; the tongue cleaner but glazy; there was entire want of appetite; he had much thirst. The voice continued hoarse, and the respiration was quickened, but on auscultation no other evidence of pulmonary disorder could be detected. The pulse was 86, feeble, and very compressible; the heart's impulse was feeble. The soft palate, tonsils, and fauces, were covered with a greyish exudation, partly of a semiliquid creamy consistence, partly membranous; the mucous membrane, where not concealed by the exudation, was of an intensely red colour. There was little or no difficulty of swallowing, and the patient was scarcely conscious of the presence of sore-throat. Wine and broth were ordered to be taken at frequent intervals, and a mixture consisting of chlorate of potass, tincture of sesquichloride of iron, and dilute hydrochloric acid, to be taken every four hours. He was also directed to use freely a gargle consisting of a drachm and a half of tincture of sesquichloride of iron to an ounce of water sweetened with honey; he was restricted to bed, and directed to be kept perfectly quiet. It being found, at the next visit, that he could not comfortably manage the gargle, the throat was directed to be painted twice a day with tincture of sesquichloride of iron diluted with an equal quantity of water. Under this treatment, the throat rapidly improved; but on March 1st, the patient still continued much depressed; the pulse was 100, feeble; heart's action feeble; tongue very red and glazy. There was still an ash-coloured exudation on the uvula. Much of the semifluid exudation had disappeared, but shreds of false membrane were hanging to the tonsils and soft palate. In other respects, the throat was improved, the mucous membrane being much less red. There was an entire absence of appetite, and notwithstanding a very liberal allowance of wine, the patient was exceedingly prostrate. The urine, scanty in quantity,

high-coloured, and loaded with lithates, was also highly albuminous.

On March 2nd, the throat was decidedly better; but the case was now assuming more decidedly the character of typhoid fever. On the 3rd, the throat might be regarded as substantially well; the exudation having entirely disappeared, and a moderate redness about the arches of the palate being the only remaining trace of its previous diphtheritic state. One or two rose-spots were now also discovered upon the abdomen. On March 4th, there was slight diarrhoea; and once a little hæmorrhage from the bowels. On March 5th, the bowels acted four or five times, rather loosely; and in the evening there was a copious hæmorrhagic evacuation, followed by alarming depression and pulselessness, from which the patient was with difficulty rallied by the aid of brandy and champagne. On the 6th, there was much less albumen in the urine, and he appeared better; but eventually he sank a few days afterwards, the later symptoms being exclusively those of typhoid fever.

The following case is mainly interesting on account of the presence of an eruption which I have now seen in several cases of diphtheria. They have all been well marked cases of the disease; but it is worthy of note, that though there was very considerable depression in at least two or three of these cases, none of them have proved fatal, neither have they usually been followed by any of the nervous disorders which so often succeed convalescence from diphtheria.

CASE IV. Miss G. H., aged 5 years, had been ailing for several days when I was requested to visit her, on June 20th, 1861. There was slight fever, loss of appetite, and languor, but the child was not confined to bed. A papular eruption had appeared upon the face, arms, and trunk, on the evening previous to my visit. Each spot was distinct, of a rose colour; and, save that they were rather larger, these spots had a close resemblance to the rose-spots of typhoid fever. They disappeared entirely under pressure, but gradually returned in a few seconds after it was withdrawn. The spots were thickly aggregated upon the cheeks and back—more scattered upon the arms and anterior surface of the trunk. The throat was found, on examination, to be deeply inflamed, and there was a considerable patch of dense looking white membranous exudation upon the left and a small thin white pellicle on the right tonsil. The breath was said to have been very offensive on the previous day. Eggs, milk, beef-tea, and other liquid nutriment, but without wine, were ordered to be given as freely as possible; and the following mixture was prescribed:

℞ Potassæ chloratæ, ℥ij; acidi hydrochlorici dil., ℥j; tincturæ ferri sesquichloridi, ℥j; syrupi, ℥ss; aquæ, ℥ijss. M.

A dessertspoonful to be taken every four hours.

June 21st. The patches on the tonsils had not extended; the eruption was slightly paler; the tongue was clean; there was no increase of depression, and the urine contained no albumen. The child varied much, being sometimes playful and at others heavy and drowsy, but her sleep was disturbed, and the breathing a little difficult while she was asleep. There was a total absence of appetite, rendering the administration of nourishment very difficult. June 22nd. Some of the eruption was declining, and had acquired a brownish hue. The exudation on the tonsil had not separated, but was wasting away. The throat was much less red, and the tongue was clean; but there was very considerable depression, and a total absence of appetite, and the skin was cold and clammy. The urine was free from albumen. The medicine was continued. A dessertspoonful of port wine was ordered to be given every four hours. June 23rd. The throat was free from exudation. The child was in all respects improved, and able to eat a little food. A mixture containing quinine in combina-

tion with tincture of sesquichloride of iron and dilute hydrochloric acid, was now substituted for the former medicine.

The patient continued to improve from this time, and I did not see her again until July 10th, when she was quite convalescent, and only a little roughness of skin remained where the eruption had been.

[To be continued.]

ANÆSTHESIA IN MIDWIFERY; WITH NEW APPARATUS FOR ITS SAFER AND MORE ECONOMICAL INDUCTION BY CHLOROFORM.

By THOMAS SKINNER, M.D., Liverpool.

[Read before the Obstetrical Society of London, May 7th, 1862.]

"But there is no danger in what show of death it makes, More than the locking up the spirits a time, To be more fresh, reviving." (*Cymbeline*.)

CHLOROFORM, as an anæsthetic, is undoubtedly one of the great subjects of the day, and inseparably connected with the advancing state of society. It would however appear, from the general spirit of many of the leading medical journals, both in Europe and America, that now, as much as ever, there exists a want of confidence in, if not a strong feeling against, the general use of chloroform, an agent, the use of which, in my estimation, is unquestionably the greatest therapeutic discovery of the age. With the view of saving chloroform as an anæsthetic from falling undeservedly in the estimation of my professional brethren, particularly those engaged in the practice of obstetric medicine, I venture to offer the following remarks: and in doing so, let me trust that, however widely I may differ in my views from others, I may be allowed a patient hearing and a calm discussion of the merits of the subject; the more so, as the conclusions which I have arrived at are the result of conscientious inquiry and close observation during a period of fourteen or fifteen years.

Chloroform as a General Anæsthetic. Some authors writing in our journals lately, have appealed to the many deaths which have occurred from the inhalation of chloroform, as facts calling for our serious attention, and as arguments against the general use of chloroform as an anæsthetic. Granting such facts to be of the utmost importance, still, when we take into consideration the great power which chloroform exercises over the heart and chief nervous centres, the enormous quantity consumed, and the incompetency of many of those who administer it, I cannot help thinking that we have more reason to be surprised at the smallness, than at the largeness of the mortality.

Again, when we consider that some of those who have been anæsthetised have recently rallied from what might have been a fatal collapse, that others have just been saved from imminent death by hæmorrhage, that a large percentage are the victims of cancerous and scrofulous growths and inflammations, and consequently are worn out with hectic and altogether *in extremis*; when we look to the emaciated and bloodless forms, the dreadful and often fatal nature of the diseased conditions, and the formidable operations to which the majority of the recipients are subjected; have we not great reason to congratulate ourselves and the public upon the incalculable amount of suffering spared to humanity under the circumstances with so small a bill of mortality, particularly in the infancy of so powerful a therapeutic agent? I have said that we have reason for congratulation in the smallness of the mortality, but I shall go further and state what I believe will meet with universal concurrence, that for every life which has succumbed to chloroform there have been many more lives prolonged, if not saved, through its benign influence. Let me add, that in con-